REMARKS

Applicant respectfully requests reconsideration of this application in view of the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in substantially the same order in which the corresponding issues were raised in the Office Action.

<u>Status of the Claims</u>

Claims 1-20 are pending. Claims 1, 7, and 13 are currently amended to more clearly define pre-existing claim limitations. No claims are canceled. Claims 19 and 20 are added. No new matter has been added.

<u>Summary of the Office Action</u>

Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wolford (hereinafter "Wolford") U.S. Patent Application No. 6,185,692 in view of Barr et al. (hereinafter "Barr") U.S. Patent Publication No. 20050044442.

<u>Response to Rejections under 35 U.S.C. § 103(a)</u>

The Office Action rejected claims 1-18 under 35 U.S.C. § 103(a) as unpatentable over Wolford in view of Barr et al. Applicant respectfully requests withdrawal of these rejections because the cited references fail to disclose all of the limitations of the claims.

CLAIMS 1-6, and 19

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being anticipated by Wolford. Applicant respectfully submits that claim 1 is patentable over the cited reference because the cited references do not disclose all of the limitations of the claim. Claim 1, as amended, recites:

> An apparatus, comprising:
> > a variable speed bus;
> > a first unit coupled to the variable speed bus;
> > a second unit coupled to the variable speed bus; and
> > an arbitration and bus clock control unit to adjust the
> variable speed bus frequency depending on the bandwidth
> requirements of the first and second units, the arbitration and bus
> clock control unit to monitor which of the first and second units

are active and to select an appropriate arbitration configuration depending on which of the first and second units are active, **wherein the arbitration and bus clock control unit is configured to adjust the arbitration configuration to ensure that the bandwidth requirements of the active units are sustained when the variable speed bus frequency is reduced.** (Emphasis added).

Applicant respectfully submits that claim 1 requires that the arbitration and bus clock control unit is configured to adjust the arbitration configuration to ensure that the bandwidth requirements of the active units are sustained when the variable speed bus frequency is reduced. Both Wolford and Barr fail to disclose at least this limitation.

Wolford is directed to a data processing system includes a bus, one or more loads coupled to the bus, and a clock generator, which generates a bus clock signal having a first frequency. While operating at the first frequency, the number of loads connected to the bus is determined, and in response to this determination, the frequency of the bus clock signal is automatically changed from the first frequency to a second frequency. See Wolford, Abstract. The frequency range of the bus clock signal is determined by the length of the bus and the number and types of devices attached to the bus. See col. 3, lines 6-8. In particular, Wolford expressly discloses that the bus clock frequency and the number of loads (e.g., devices attached to the bus) have a pre-determined relationship, namely 1-3 loads operate at 66 MHz, 4-5 loads operate at 50 MHz, 6-10 loads operate at 33 MHz, and 11-15 loads operate at 25 MHz. See col. 3, lines 8-29. Furthermore, the frequency of the bus clock signal is constrained to operate at a frequency no greater than the lowest maximum operating frequency of any bus device directly connected to the bus. Consequently, the appropriate frequency of the bus clock signal is set based on the number of bus devices detected on the bus and the lowest maximum operating frequency of those bus devices on the bus. See col. 4, lines 30-41. Accordingly, Wolford disclose that the frequency of the bus clock signal is adjusted depending on the number of bus devices detected on the bus and the lowest maximum operating frequency of those bus devices, and not on the bandwidth requirements of the bus devices. Nothing in Wolford discloses adjusting an arbitration configuration, nor adjusting the arbitration configuration to ensure that the bandwidth requirements of the active units are sustained when the variable speed bus is reduced, as required in claim 1.

Barr is directed to a frequency manager that automatically selects a clock frequency for device(s) or bus(es) in a system, based on information received from the device(s) in order to optimize performance of the device(s) without exceeding the system's power/thermal budget (e.g., operating all the devices at a single clock frequency that is the highest clock frequency possible without exceeding the budget). See Barr, Abstract, para. 25 and 48. The information received from the device(s) may include the number of devices, heat-dissipation characteristics of the device(s), power consumption characteristics of the device(s), and characteristics of an application program that is to be executed by a system that includes the device(s). See Barr, para. 44. Although Barr discloses that the frequency manager is configured to allocate a system's power/thermal budget among its devices in proportion to the devices' respective bandwidth requirements, nothing in Barr discloses adjusting an arbitration configuration, nor adjusting the arbitration configuration to ensure that the bandwidth requirements of the active units are sustained when the variable speed bus is reduced, as required in claim 1.

Given that the combination of cited references fails to disclose all of the limitations of the claim, Applicant respectfully submits that claim 1 is patentable over the cited references. Accordingly, Applicant requests that the rejection of claim 1 under 35 U.S.C. § 103(a) be withdrawn.

Given that claims 2-6, and 19 depend from independent claim 1, which is patentable over the cited references, Applicant respectfully submits that dependent claims 2-6 are also patentable over the cited references. Accordingly, Applicant requests that the rejection of claims 2-6 under 35 U.S.C. § 103(a) be withdrawn.

CLAIMS 7-12, and 20

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wolford in view of Barr. Applicant respectfully submits that claim 7 is patentable over the cited references for similar reasons described above with respect to claim 1. Accordingly, Applicant requests that the rejection of claim 7 under 35 U.S.C. § 103(a) be withdrawn.

Given that claims 8-12, and 20 depend from independent claim 7, which is patentable over the cited references, Applicant respectfully submits that dependent claims

8-12 are also patentable over the cited references. Accordingly, Applicant requests that the rejection of claims 8-12 under 35 U.S.C. § 103(a) be withdrawn.

CLAIM 13-18

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wolford in view of Barr. Applicant respectfully submits that claim 13 is patentable over the cited references for similar reasons described above with respect to claim 1. Accordingly, Applicant requests that the rejection of claim 13 under 35 U.S.C. § 103(a) be withdrawn.

Given that claims 14-18 depend from independent claim 13, which is patentable over the cited references, Applicant respectfully submits that dependent claims 14-18 are also patentable over the cited references. Accordingly, Applicant requests that the rejection of claims 14-18 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

It is respectfully submitted that in view of the amendments and remarks set forth herein, the rejections have been overcome. If the Examiner believes a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Michael J. Mallie at (408) 720-8300.

If there are any additional charges, please charge them to Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: 3/6 , 2007
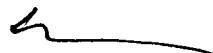
Michael J. Mallie
Reg. No. 36,519

12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025-1030
(408) 720-8300